

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
12 May 2005 (12.05.2005)

PCT

(10) International Publication Number
WO 2005/042981 A1

(51) International Patent Classification⁷:

F04F 1/02

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:

PCT/GB2004/004527

(22) International Filing Date: 25 October 2004 (25.10.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0324965.3 25 October 2003 (25.10.2003) GB

(71) Applicant (for all designated States except US): TEK-GENUITY LIMITED [GB/GB]; The Campus Ventures Centre, Zochonis Building, Oxford Road, Manchester M13 9PL (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): TODD, Roger, Keith [GB/GB]; The Campus Ventures Centre, Zochonis Building, Oxford Road, Manchester M13 9PL (GB).

(74) Agents: NEIL, Alastair, William et al.; Appleyard Lees, 15 Clare Road, Halifax HX1 2HY (GB).

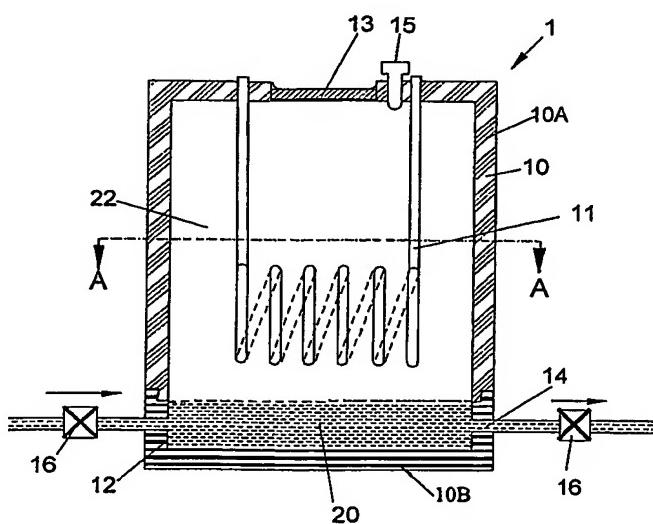
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A PUMP



(57) Abstract: A pump and pumping method are described. The pump (1) includes a pump body (10) in which a heating element (11) is located. Heating of gas in the pump body (10) by the heating element (11) and subsequent cooling of gas in the pump body (10) draws liquid into the pump body (10) through an inlet (12) and out of the pump body (10) through an outlet (14). To improve efficiency of the operation of the pump (1) the pump body (10) is shaped so that the heating of the gas by the heating element (11) promotes substantially non-divergent body movement of the volume of gas. In this way the effectiveness of the heating of the gas is improved and therefore the overall pumping efficiency is raised. A cooling element (13) is optionally provided, preferably in an arrangement in which heating and cooling of the volume of gas does not change the pattern of movement of the gas within the pump body (10).

WO 2005/042981 A1